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**United States Patent** [19][11] **Patent Number:** **5,106,180****Marie et al.**[45] **Date of Patent:** **Apr. 21, 1992**[54] **MULTIFOCAL OPHTHALMIC LENS**4,950,057 8/1990 Shirayanagi ..... 351/169  
5,016,977 5/1991 Baude et al. .... 351/176[76] **Inventors:** **Robert Marie**, 4965 Roslyn,  
Montreal, Canada, H2W 1Z5; **Grant**  
**Gabrielian**, 175 Deguire, Apt. 711,  
Ville St-Laurent, Canada, H4N 1P1**FOREIGN PATENT DOCUMENTS**1319800 1/1963 France .  
WO88/09950 12/1988 PCT Int'l Appl. .*Primary Examiner*—Scott J. Sugarman  
*Attorney, Agent, or Firm*—Robic[21] **Appl. No.:** **707,902**[22] **Filed:** **May 30, 1991**[51] **Int. Cl.<sup>5</sup>** ..... **G02C 7/04**[52] **U.S. Cl.** ..... **351/161; 359/628**[58] **Field of Search** ..... 351/159, 168, 169, 170,  
351/171, 172, 176, 160 H, 160 R, 161, 162;  
350/452, 167; 359/626, 628, 742[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57] **ABSTRACT**

An ophthalmic lens has front and rear optical surfaces, a central optical axis substantially perpendicular to the lens and comprises a plurality of concentric, contiguous circular refractive bands provided on at least one of the front and rear optical surfaces. The bands have a continuous cross-section in the shape of a segment of an ellipse having a given major axis length and eccentricity. The bands are of alternating optical power to focus light on at least two focal planes to provide simultaneous multifocal vision. The major axis of each ellipse segment intersects the central optical axis and a respective one of the at least two focal planes. The bands are continuous at their boundaries between neighboring ones of the bands. The entire optical surface of the lens may be used with minimal distortion caused by the intersections of the continuous bands.

**5 Claims, 2 Drawing Sheets**